

Technology Skills

Front End: Typescript, React, Vue, Redux, Prisma, Jest, Cypress

Back End: Python, Node.js, Django, Flask, PHP; Some Scala, Haskell, Rust

DevOps: Azure, AWS, Docker, SQL, Linux, Windows Server; Some Terraform, Kubernetes

Experience

Developer, Fosforescent

2023-2024

Application

- Designed a novel graph rewriting system for collaborative workflow management, combining functional programming concepts with practical task management
- Implemented using OpenAI API to generate graph-based workflows
- Created typescript & react UI library to allow navigating & drag & drop editing of task graph
- Created multiple iterations of backend including Rust web server running Stripe integration, and Node.js version with content-addressed node storage, semantic search with Pinecone and OpenAI API, as well as integrations with chat completions API.

Infrastructure/DevOps

- Developed CI/CD pipeline with github actions
- Developed multiple iterations of Infrastructure, including infrastructure as code repository using Terraform, automatically provisioning Kubernetes instance, databases, creating appropriate secrets for production and development, as well as ArgoCD instances, pipeline for automating Docker Build & Kubernetes deployment for backend

Research

- Researched graph rewriting systems, combinator systems, & dependent type systems

Lead Full Stack Engineer, Dojo AI

2021-2023

- Designed and implemented a CI/CD pipeline in Heroku & GitHubActions and added an entire test suite using Cypress, Pytest, and Jest tests.
- Introduced Docker & Docker Compose local development & testing environment
- Created & maintained production, testing and dev environments in Heroku, AWS, passing rigorous security review processes.

Features

- Improved performance and maintainability through multiple phases of refactoring front end and back end, including adding progressive loading to d3 force graph visualization, improving DB schema
- Increased performance of endpoint from several minutes to under 10 seconds for large projects, increasing feasible project size by 100x+
- Added AWS Lambda function with AWS Serverless Application Module to handle log drain
- Designed & implemented concept of groups, group member, node hierarchy
- Implemented new admin UI to conform to JWT auth requirement of 3rd party pen test

Management

- Led remote team of 1 FT engineer as well as 2 regular full time contractors
- Responsible for validating feature implementation plans, code review, quarterly feedback

Senior Full Stack Engineer, <i>Care.Coach</i>	2018-2021
<ul style="list-style-type: none"> - Designed & created Django-based internal service to house updated schema + machine learning models & integrations as well as collected, monitored & analyzed performance metrics and logs for reporting - Upgraded video streaming architecture from Flash/RTMP to HTML5/WebRTC by implementing web client, server configuration, guiding implementation of Android mobile client - Upgraded security to meet standards of major client 3rd party security audit - Integration with hospital EMR & our cloud-hosted SQL Server DB using Java Spring 	
<i>DevOps</i>	
<ul style="list-style-type: none"> - Introduced automated testing using Selenium - Created & maintained production, testing and dev environments in Azure - Completed migration of production & staging infrastructure from dedicated linux server to Azure with minimal downtime 	
Independent Contractor, <i>David M Noll LLC</i>, Louisville, KY	2014-2015, 2017-2018
<ul style="list-style-type: none"> - Created web applications in PHP, JavaScript, AWS EC2, shared hosting - Designed and implemented Python desktop application for cryptocurrency trading 	
Interactive Developer, <i>JUMP by LEAP agency</i>, Louisville, KY	2015-2016
<ul style="list-style-type: none"> - Development with WordPress, Laravel or PHP/HTML, MySQL, JavaScript 	
IT Consultant, <i>Derby City IT</i>, Louisville, KY	2012-2013

Open Source

ChkFlow: a React component editor/view for tree data inspired by Workflowy's interface

GLTrader: desktop app for real-time monitoring of cryptocurrency market data via Bittrex API

Education

<i>Rensselaer Polytechnic Institute</i> , M.S. in Global Enterprise Management	2010
<i>Case Western Reserve University</i> , B.A. in Cognitive Science	2008